

**YORKSHIRE AND HUMBER REGION  
AGGREGATES WORKING PARTY**

**ANNUAL REPORT 2009  
AGGREGATES MONITORING 2009**

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## **EXECUTIVE SUMMARY**

The 2009 survey is part of the annual programme that collects data on sales of aggregate minerals in the Yorkshire and Humber Region. It is also one of the four-yearly surveys that includes data on distribution and on the level of permitted reserves.

Sales of primary aggregates in the region have been relatively consistent over the period leading up to the fourth quarter of 2008. Because of the recession, sales have fallen significantly since then and in 2009 total sales for land-won sand and gravel aggregate were down to 2.9 million tonnes (mt) and for crushed rock aggregate had fallen to 7.2mt.

The technical advice of the Working Party is that aggregate provision and landbanks in mineral planning authority areas should be calculated on the basis of historical shares over a rolling seven year period.

Permitted reserves of sand and gravel suitable for concrete aggregate remain low.

With the exception of reserves of chalk for aggregate use in the East Riding and North Lincolnshire, permitted reserves of crushed rock remain at a high level.

Information is provided in the report on the proportion of primary aggregate sales from National Parks and AONBs, the transport of aggregates and on alternatives to primary aggregates.

## 1.0 **INTRODUCTION**

- 1.1 The Annual Report for 2009 has been prepared by the Aggregates Working Party for Yorkshire and Humber Region. It presents statistical information on the aggregate minerals industry in the Region for 2009.
- 1.2 The RAWP is a technical working group with membership drawn from mineral planning authorities, the minerals industry and the Department for Communities and Local Government (DCLG). There are similar working parties in the other regions of England and in North and South Wales. A list of current members is contained in Appendix 1.
- 1.3 There are 17 mineral planning authorities in the region. With the exception of North Yorkshire County Council these are unitary authorities. The Yorkshire Dales and North York Moors National Parks are mostly within North Yorkshire and are separate mineral planning authorities. All aggregate quarries in the National Parks are within North Yorkshire.
- 1.4 The statistical information on sales has been provided by the industry. The data has been collected by individual mineral planning authorities or by the Secretary and then collated at regional level. The response by industry to the survey has generally been good throughout the Region, although some data has been provided in an approximate form or has been estimated. This factor should be borne in mind when considering any particular figures in detail.
- 1.5 The purpose of the survey is to collect information on sales, distribution and permitted reserves of aggregates in the region. Where sites produce material that is sold for both aggregate and non-aggregate use, the tonnage sold for non-aggregate use is also recorded. However, this does not represent a comprehensive survey of non-aggregate sales in the region and there are significant sales of industrial non-aggregate minerals, cement and blockstone/building stone that are not included. It is therefore emphasised that the survey should not be used to derive sales figures for non-aggregate materials.
- 1.6 Information on permitted reserves has been collected in this survey. This includes information on the proportion of reserves at each site that companies estimate would be used for non-aggregate purposes. The reserve figures shown in the report are the operators' estimates of permitted reserves for aggregate use.
- 1.7 A number of companies, when providing data for this report, have requested that confidentiality be maintained. The report has been prepared to comply with these requests and, as a result, in some areas figures for authorities have had to be combined.
- 1.8 *It should be noted that the tonnages shown in the tables have been rounded. Some columns and rows may therefore not add up exactly to the indicated totals.*
- 1.9 A list of the sites in the region, which produce primary aggregates, is included as Appendix 2 and the Working Party's publications are shown in Appendix 3.

2.0 **NATIONAL AND REGIONAL GUIDELINES FOR AGGREGATES PROVISION IN ENGLAND, 2005 - 2020**

2.1 In June 2009 the Department for Communities and Local Government (DCLG) published revised guidelines for aggregates provision in England for the 16 year period 2005 to 2020. These replaced the guidelines for the period 2001 to 2016 published in June 2003.

2.2 The guidelines are set out in Table 1.

**Table 1: National and Regional Guidelines for Aggregates Provision in England, 2005 – 2020 (Million Tonnes)**

New Regions	Guidelines for land-won production		Assumptions		
	Land-won Sand & Gravel	Land-won Crushed Rock	Marine Sand & Gravel	Alternative Materials	Net Imports to England
South East England	195	25	121	130	31
London	18	0	72	95	12
East of England	236	8	14	117	7
East Midlands	174	500	0	110	0
West Midlands	165	82	0	100	23
South West	85	412	12	142	5
North West	52	154	15	117	55
Yorkshire & Humber	78	212	5	133	3
North East	24	99	20	50	0
<b>England</b>	<b>1028</b>	<b>1492</b>	<b>259</b>	<b>993</b>	<b>136</b>

2.3 For the Yorkshire and Humber Region, the guideline figure for total land-won production shows a slight fall from 293mt to 290mt when compared with the previous guidelines. However, the split between sand and gravel and crushed rock has been amended to reflect the actual split in sales recorded in 2005. As a result, the guideline figure for land-won sand and gravel is increased from 73mt to 78mt over the 16 year period and for crushed rock is reduced from 220mt to 212mt.

**The Sub-Regional Apportionment**

2.4 The previous regional guideline figures were sub-divided on the basis of historic shares taken from average sales in different parts of the region over the period 1997 to 2001. This apportionment was incorporated into the Regional Spatial Strategy (RSS), the Yorkshire and Humber Plan.

**The Yorkshire and Humber Plan**

2.5 The Yorkshire and Humber Plan, published in May 2008, is the statutory Regional Spatial Strategy (RSS) for the region. It was drawn up to cover the period to 2026, but the Government intends to abolish all such plans and has included measures in the Localism

Bill. When this comes into force later this year, minerals policies contained in the RSS including the sub-regional apportionment of the national and regional guidelines will disappear.

### **Sales of Aggregates 2005 - 2009**

- 2.6 Over the 16 years of the published guidelines the total provision in the region for sand and gravel is 78mt and for crushed rock is 212mt. This is equivalent to average annual figures of 4.875mt for sand and gravel and 13.25mt for crushed rock. In Table 2 these figures are compared with actual sales.

**Table 2: Actual sales of aggregate compared with the guideline figure for the period 2005 to 2009 (million tonnes)**

	2005	2006	2007	2008	2009	Five year total 2005 – 2009
Sand and Gravel sales	4.398	4.326	4.367	3.807	2.929	19.827
Sand and Gravel guideline	4.875	4.875	4.875	4.875	4.875	24.375
Crushed rock sales	11.964	11.099	11.475	10.364	7.240	52.142
Crushed rock guideline	13.25	13.25	13.25	13.25	13.25	66.250

- 2.7 It can be seen from Table 2 that actual sales in the region have consistently been below the guideline figure. Since the fourth quarter of 2008 because of the recession, sales have fallen significantly.

### **Advice of the Aggregates Working Party**

- 2.8 At the meeting of the Working Party on 17 March 2011 it was agreed that the sub-regional apportionment in the Yorkshire and Humber Plan (RSS), although still current policy, is out of date and will disappear when the Localism Bill is passed. It was further agreed that the technical advice of the Working Party for consideration by mineral planning authorities is that on an interim basis, until updated guidance is available, aggregate provision and landbanks in mineral planning authority areas should be calculated on the basis of historical shares over a rolling seven year period. This approach is used in the calculation of landbanks in Tables 7 and 12 of this report where figures from the sale of aggregates over the seven year period from 2003 to 2009 are used.

### 3.0 **SAND AND GRAVEL**

- 3.1 Sand and gravel deposits are worked in the region from the valley of the River Swale in the north, through the Vale of York and in areas around the Humber Estuary in the south.
- 3.2 Table 3 shows sales of land-won sand and gravel by former county area, together with marine aggregates landed at Hull. To allow comparisons to be made, figures for the six year period from 2004 are shown. Sales of aggregate and non-aggregate sand and gravel in the region had been at a fairly constant level of around 4.7mt for a number of years. Because of the recession, sales fell during the fourth quarter of 2008 and have continued at a lower level during 2009 when total sales were only 3.2mt. The reduction in sales has been most pronounced in North Yorkshire. The only area where there was an increase in sales was South Yorkshire (Doncaster MBC) where the figure is highly dependent on whether sales from Finningley Quarry, on the border of the region, are from reserves located in the Doncaster or the Nottinghamshire part of that quarry.

**TABLE 3 - SAND AND GRAVEL AGGREGATE AND NON-AGGREGATE SALES 2004-2009 (million tonnes)**

	2004	2005	2006	2007	2008	2009
North Yorkshire	2.8	2.8	2.7	2.7	2.3	1.7
South Yorkshire	0.6	0.5	0.5	0.4	0.4	0.5
West Yorkshire						
East Riding and North Lincolnshire	1.1	1.1	1.2	1.3	1.0	0.9
Marine (Hull)	0.2	0.3	0.3	0.3	0.2	0.1
<b>TOTAL</b>	<b>4.8</b>	<b>4.7</b>	<b>4.7</b>	<b>4.7</b>	<b>4.0</b>	<b>3.2</b>

- 3.3 A breakdown of sales of land-won sand and gravel by end-use is set out in Table 4. Total sales for aggregate use fell sharply to only 2.9mt, compared with 3.8mt in 2008 and 4.4mt in 2007. The main use was for concrete aggregate, which accounted for 1.9mt, but this was down 0.6mt from 2008 levels.

**TABLE 4 – SALES BY END USE IN 2009 OF LAND WON SAND AND GRAVEL (thousand tonnes)**

	Sand for Asphalt	Sand for Mortar	Sand for Concreting	Gravel for Concrete Aggregate	Other Screened and Graded Gravel	Sand and Gravel for Constructional Fill	Total for Aggregate Use	Non-Aggregate Use
North Yorkshire	10	121	647	565	262	37	1642	*
South Yorkshire	38	135	207	100	43	1	471	-
West Yorkshire							52	
East Riding	2	126	370	40	187	39	764	*
North Lincolnshire								
<b>TOTAL</b>	<b>49</b>	<b>382</b>	<b>1223</b>	<b>704</b>	<b>493</b>	<b>78</b>	<b>2929</b>	<b>*</b>

\* Confidential figure

- 3.4 Figures in Table 4 have had to be combined to preserve confidentiality where necessary to meet the wishes of individual companies. This has meant that all figures for the East Riding and North Lincolnshire are combined.
- 3.5 The 2009 survey is the latest of the four yearly surveys that collect distribution figures. In addition to movement between regions, information on movement within the region was also sought. However, because limited information has been received on distribution within the region, meaningful figures can only be given for inter-regional movements and these are set out in Table 5.

**TABLE 5 – DESTINATION OF SALES OF LAND WON SAND AND GRAVEL AGGREGATE IN 2009 (thousand tonnes)**

Destination → Producer ↓	Yorkshire and Humber Region	North East Region	East Midlands Region	Other Regions	TOTAL Sold by Producer
North Yorkshire	1033	609	-	*	1642
South and West Yorkshire	476	*	41	4	523
E Riding and North Lincolnshire	665	5	82	12	764
<b>TOTAL SOLD TO DESTINATION</b>	<b>2174 (74%)</b>	<b>615 (21%)</b>	<b>123 (4%)</b>	<b>17 (1%)</b>	<b>2929</b>

\*Small tonnage

- 3.6 About three quarters of sales were reported as being within the Yorkshire and Humber Region. Significant levels of export are from quarries in North Yorkshire into the North East and from South Yorkshire, East Riding and North Lincolnshire into the East Midlands.
- 3.7 The survey sought information to subdivide permitted reserves of sand and gravel into sand suitable for concreting, other sand and total gravel. The figures are set out in Table 6. The returns show more detail than provided in the 2005 survey, with less of the total reported as undifferentiated sand and gravel. However, a significant proportion of the North Yorkshire total is undifferentiated. The figures confirm previous indications that only a small proportion of permitted reserves in Doncaster are suitable for use as concreting aggregate. They also confirm the low level of permitted reserves in the single operating site in Leeds.

**TABLE 6 – PERMITTED RESERVES OF SAND AND GRAVEL FOR AGGREGATE USE AT 31.12.09 (thousand tonnes)**

	Sand Suitable for Concreting	Other Sand	Total Sand	Total Gravel	Undifferentiated Sand and Gravel	Total Sand and Gravel Reserves
North Yorkshire	3677	1770	5447	4740	8230	18417
Doncaster (South Yorkshire)	725	4082	4807	225	-	5032
Leeds (W Yorkshire)	248	-	248	83	-	330
East Riding and North Lincolnshire	5741	1533 <sup>*A</sup>	7275	2582	975	10831

<sup>\*A</sup> Includes undifferentiated sand



- 3.8 The reserve figures shown in Table 6 are the total reserves identified by operators as being for aggregate use. Permitted reserves for non-aggregate use are not included in the figures.
- 3.9 As in previous reports, North Yorkshire sand and gravel reserves have been subdivided between sites with predominantly northwards or southwards distribution of sand and gravel, which have reserves of material suitable for the production of concrete. Sites in North Yorkshire with reserves of mostly soft sand are shown as a separate category. These are set out in Table 7. To maintain requested confidentiality reserves for aggregate use in East Riding and North Lincolnshire have had to be combined.

**TABLE 7 – RESERVES OF SAND AND GRAVEL FOR AGGREGATE USE AND LANDBANKS**

	Reserves at 31.12.09 (thousand tonnes)	Seven year average sales 2003 – 2009 (thousand tonnes per annum)	Landbank at 31.12.09 (years)
North Yorkshire (whole County)	18417	2498	7.4
- sand and gravel northwards distribution	(9200)	913	10.1
- sand and gravel southwards distribution	(7527)	1497	5.0
- sand quarries	(1690)	89	19.0
Doncaster (South Yorkshire)	5032	553	9.7
Leeds (W Yorkshire)	330		
East Riding	10831	1069	10.1
North Lincolnshire			

The advice of the Working Party has been followed in drawing up this table and landbanks have been calculated using sales of aggregate over the most recent seven year period for which figures are available, 2003 to 2009. Because sales figures have been combined at the request of operators over parts of this seven year period, the calculations of landbanks for South and West Yorkshire and for the East Riding and North Lincolnshire have had to be combined.

- 3.10 The existing sites in the region thought to be capable of producing concreting sand and gravel are listed in Table 8.

**TABLE 8 – SAND AND GRAVEL QUARRIES CAPABLE OF PRODUCING CONCRETE AGGREGATE**

<b>North Yorkshire</b>		
Allerton Park	Hanson	Active
Bridge Farm/Pallett Hill	Cemex	Active
Kiplin Hall	Lafarge	Active
Manor House Farm	Tarmac	Not active
Marfield	Lafarge	Active
Nosterfield	Tarmac	Active
Ripon	Hanson	Active
Ripon City	Aggregate Industries	Active

Scorton/Tancred	Tarmac	Active
Wykeham	Hanson	Active
<b>Doncaster MBC</b>		
Dunsville	Marshalls	Active
Finningley	Lafarge	Site mostly in Notts.
<b>Leeds CC</b>		
Methley	Lafarge	Active
<b>East Riding of Yorkshire</b>		
Brandesburton	Sandsfield Gravel	Active
Park Farm	W Clifford Watts	Active
Little Catwick	Yarrows Aggs	Active
Mill Hill	Holderness Aggs	Active
North Cave	Humberside Aggs	Active
<b>North Lincolnshire</b>		
Cove Farm	Sibelco	Active
Kettleby Parks	C & G Concrete	Active

## 4.0 **CRUSHED ROCK**

- 4.1 A number of different rock types are worked in the region. The oldest of these are the Lower Palaeozoic siltstones and greywackes ("gritstones") which occur beneath Carboniferous strata in the Yorkshire Dales and are worked to produce high specification aggregate for road surfacing. The limestones quarried in the region are the Carboniferous Limestone of the Pennines, Magnesian Limestone on the western edge of the Vale of York and Jurassic Limestone around the Vale of Pickering. Chalk is quarried in the Yorkshire and Lincolnshire Wolds. Carboniferous sandstones in the Pennines are worked for both aggregate and building stone.
- 4.2 Table 9 sets out details of crushed rock sales over the six year period 2004 to 2009. Total sales remained relatively constant at around 12mt per year until the fourth quarter of 2008 when sales fell because of the recession. Sales in 2009 fell significantly to only 7.7mt in the year. The fall was most evident in North Yorkshire (the country area and the Yorkshire Dales National Park) and in South Yorkshire, where the only active quarries are in Doncaster.

**TABLE 9 - CRUSHED ROCK: AGGREGATE AND NON-AGGREGATE SALES 2003-2008 (million tonnes)**

	2004	2005	2006	2007	2008	2009
North Yorkshire	8.2	8.1	7.7	8.4	7.6	5.3
- North Yorkshire County Council	(4.2)	(3.9)	(3.8)	(4.3)	(3.8)	(2.6)
- Yorkshire Dales NP	(3.8)	(4.0)	(3.9)	(4.0)	(3.9)	(2.7)
- North York Moors NP	(0.2)	(0.1)	(0.05)	(0.07)	-	-
South Yorkshire	3.1	3.0	2.6	2.3	2.2	1.4
West Yorkshire	1.2	1.2	1.1	1.1	0.9	0.9
E Riding	0.3*	0.4	0.3	0.3	0.2	0.1
North Lincolnshire						
<b>TOTAL</b>	<b>12.7</b>	<b>12.7</b>	<b>11.7</b>	<b>12.1</b>	<b>10.9</b>	<b>7.7</b>

- 4.3 Crushed rock sales by end use are shown in Table 10. The total for aggregate use has fallen significantly from 10.4mt in 2008 down to 7.2mt in 2009. Falls are recorded across all categories of end use, but with the smallest reduction in constructional fill.

**TABLE 10 - CRUSHED ROCK SALES IN 2009 BY END USE (thousand tonnes)**

	Coated Roadstone	Uncoated Roadstone Including Surface Dressing	Fine and Coarse Concrete Aggregate	Other Screened and Graded Aggregates	Constructional Fill and Armour-stone	Total for Aggregate Use	Non-Aggregate Use
North Yorkshire	1095	936	1041	564	1495	5132	213
- North Yorkshire County Council	(129)	(464)	(236)	(421)	(1249)	(2500)	(111)
- Yorkshire Dales National Park	(966)	(472)	(805)	(143)	(246)	(2632)*A	(102)
South Yorkshire	-	457	564	118	144	1282	146
West Yorkshire	-	268	291	163	40	762	90
East Riding	-	15	-	8	42	64	14
<b>TOTAL</b>	<b>1095</b>	<b>1676</b>	<b>1896</b>	<b>853</b>	<b>1720</b>	<b>7240</b>	<b>463</b>

\*A Includes 914 (thousand tonnes) high specification aggregate (siltstone and greywacke)

4.4 The 2009 Survey collected distribution information. As explained in paragraph 3.5, meaningful figures are only available for movements between regions and these are set out in Table 11.

**TABLE 11 – DESTINATION OF SALES OF CRUSHED ROCK AGGREGATE IN 2009 (thousand tonnes)**

Destination → Producer ↓	Yorkshire and Humber Region	North East Region	North West Region	East Midlands Region	Other Regions	TOTAL SOLD BY PRODUCER
North Yorkshire County Council	2176	323	*	*	-	<b>2500</b>
Yorkshire Dales National Park	1685	27	792	14	114	<b>2632</b>
South Yorkshire	1101	-	*	172	8	<b>1282</b>
West Yorkshire	762	-	-	-	-	<b>762</b>
East Riding	64	-	-	-	-	<b>64</b>
<b>TOTAL SOLD TO DESTINATION</b>	<b>5789 (80%)</b>	<b>350 (5%)</b>	<b>792 (11%)</b>	<b>186 (2.5%)</b>	<b>122 (1.5%)</b>	<b>7240</b>

\* Small tonnage

4.5 The distribution of sales from the region's quarries is broadly similar to that recorded in the 2001 survey, with 80% of sales being for consumption within the region. There are significant sales of crushed rock aggregate from quarries in North Yorkshire County to the North East Region. Quarries in the Ribblesdale area of the Yorkshire Dales National Park have high levels of sales of both limestone and high polished stone value (psv) gritstones into North West Region. There are also sales of high psv stone from the Yorkshire Dales to the North East, East Midlands and other English regions as well as to parts of Wales and Scotland.

4.6 Permitted reserves of crushed rock at the end of 2009 are set out in Table 12. There are high levels of reserves throughout the region except in the East Riding and North Lincolnshire where small tonnages of low grade chalk aggregates are produced. Quarrying of rock in the East Riding and North Lincolnshire is predominantly the working of chalk to produce cement and industrial minerals, which are not covered by this survey.

**TABLE 12 – RESERVES OF CRUSHED ROCK FOR AGGREGATE USE AND LANDBANKS**

	Reserves at 31.12.09 (thousand tonnes)	Seven year average sales 2003 - 2009 (thousand tonnes per annum)	Landbank at 31.12.09 (years)
North Yorkshire County Council	103898	3674	28.3
Yorkshire Dales N P	106238 <sup>*A</sup>	3696	28.7
South Yorkshire	63410	2302	27.5
West Yorkshire	27143	959	28.3
East Riding	1708	276	6.2

\*A Includes 7969 thousand tonnes of siltstone and greywacke (high psv) reserves

The advice of the Working Party has been followed in drawing up this table and landbanks have been calculated using sales of aggregate over the most recent seven year period for which figures are available, 2003 to 2009.

## 5.0 **AGGREGATE SALES FROM NATIONAL PARKS AND AONBS**

- 5.1 The Yorkshire and Humber plan, the statutory Regional Spatial Strategy for Yorkshire and Humber contains Minerals Policy ENV4 which sets out that MPAs should seek a progressive reduction in aggregate production from National Parks and Areas of Outstanding Natural Beauty (AONB). As discussed above, the RSS and Policy ENV4 will cease to exist when the Localism Bill becomes law.
- 5.2 Figures on sales from national parks and AONBs in the region are available from 1997 onwards and the figures from 2004-2009 are set out in Table 13. The figures show total sales for aggregate uses.

**TABLE 13 – PRIMARY AGGREGATE SALES 2004-2009 (thousand tonnes)**

	2004	2005	2006	2007	2008	2009
Crushed Rock	12078	11964	11099	11475	10364	7240
Sand and Gravel	4515	4398	4326	4367	3807	2929
Marine	238	283	297	270	213	148
Total	16830	16644	15722	16112	14383	10318
National Parks	3962 (24%)	4092 (25%)	3866 (25%)	4077 (25%)	3787 (26%)	2632 (26%)
AONBs	835 (5%)	820 (5%)	790 (5%)	855 (5%)	824 (6%)	510 (5%)
NP and AONBs	4797 (29%)	4912 (30%)	4656 (30%)	4931 (31%)	4610 (32%)	3141 (30%)

- 5.3 The table shows that about a quarter of all primary aggregate sales in the region are from sites in national parks. Since the closure of the two aggregate quarries in the North York Moors NP, all of these sales are from quarries within the Yorkshire Dales. Just under a third of sales come from national parks and AONBs. Over the period, the proportion of primary aggregate sales from national parks shows a slight upward trend, with a fairly constant proportion from AONBs. The quarries in these areas include some of the region's major production sites with relatively high levels of sales and permitted reserves. Accordingly, there is no indication that there is likely to be a significant decrease in the proportion of sales from these areas in the short to medium term.

## 6.0 TRANSPORT OF AGGREGATES

- 6.1 Most of the aggregate produced in the region is transported by road.
- 6.2 There are a number of railheads, rail depots and marine and canal wharves in the region, which are used for the transport of aggregates. These are listed in Table 14.

**TABLE 14 – RAILHEADS, AGGREGATES RAIL DEPOTS AND WHARVES**

<b>Railheads</b> Swinden Quarry – Tarmac Ribblehead – Hanson (used for timber at present)
<b>Aggregates Rail Depots</b> Dairycoats, Hull – Tarmac Cross Green, Leeds – Tarmac Hunslet, Leeds – Hanson (not currently developed) Dewsbury – Tarmac (not currently operational) Selby – Potter Group/Cemex Great Heck – Plasmor/Tarmac Stourton, Leeds – Cemex Wakefield – Hanson (not currently operational)
<b>Marine Wharves</b> Alexandra Dock, Hull – Humber Sand and Gravel (marine dredged S & G) Queen Elizabeth Dock, Hull – Stema Shipping (imports from Norway and Denmark)
<b>Canal Wharves</b> Whitwood Wharf – Lafarge Cadeby Quarry, Doncaster – Lafarge (occasional use)

- 6.3 Stone is hauled by rail from Swinden Quarry, in the Yorkshire Dales National Park, to Hull, Leeds and Great Heck. It is hoped that rail haulage to Teesside will be resumed if the works at Redcar are reopened.
- 6.4 Stone is imported in to the region by rail from Derbyshire to rail depots in Selby and Leeds and from South Wales into Leeds.
- 6.5 Marine dredged aggregate is landed at Alexandra Dock in Hull. Stema Shipping (UK) Ltd imports crushed rock aggregates from their coastal quarries in Norway, and sand from Denmark through Queen Elizabeth Dock in Hull.
- 6.6 Sand and gravel is transported by barge from locations on the River Trent to wharves in the region. From time to time limestone is taken by barge from Cadeby Quarry, near Doncaster.

## 7.0 ALTERNATIVES TO PRIMARY AGGREGATES

7.1 Within the region, the minerals waste and industrial by-products used as aggregates are unburnt colliery spoil, metallurgical slags and power station wastes (furnace bottom ash and pulverised fuel ash). Data, collected for the RAWP, on the sales of these materials in 2009 are shown in Table 15.

**TABLE 15 - SALES OF ALTERNATIVE AGGREGATE MATERIALS IN 2009 (thousand tonnes)**

			Source
Power Station Ash	PFA	617	Drax, Eggborough, Ferrybridge and Gale Common
	FBA	238	
	Total Ash	855	
Metal Slag		972	Scunthorpe and Rotherham
Colliery Spoil		667	Kellingley

7.2 PFA and FBA were used mostly for block manufacture and engineering fill with dry PFA also being used for cement/aggregate additive. Colliery spoil was used mainly for bank building and constructional fill. Uses of metal slag were mainly for coated and uncoated roadstone, surface dressing and concrete aggregate. Approximately 450,000 tonnes of slag were used for non-aggregate purposes.

7.3 In recent years there have been significant changes in the coal industry in the region that affect the availability and use of colliery spoil. The Selby Coalfield closed in October 2004 leaving Kellingley Colliery as the only mine in production in North Yorkshire.

7.4 A further source of regional data on the arisings and use of these materials is the "Survey of Arisings and Use of Alternatives to Primary Aggregates in England, 2005; Other Materials" undertaken by Capita Symonds Ltd for the DCLG and published in February 2007. Figures taken directly from the Material Summary Sheets in Annex 1 of that survey are set out in Table 16.

**TABLE 16 – ARISINGS AND USE OF ALTERNATIVES TO PRIMARY AGGREGATES IN 2005 (million tonnes)**

	Total Arisings	Aggregate Use	Other Use	Potentially Available
Pulverised Fuel Ash (pfa)	1.68	0.29	0.61	0.77
Furnace Bottom Ash (fba)	0.33	0.29	0.00	0.00
Blast Furnace Slag (Iron)	1.00	0.25	0.75	0.00
Basic Oxygen Furnace Slag (Steel)	0.25	0.13	0.00	0.12
Electric Arc Furnace Slag (Steel)	0.22	0.22	0.00	0.00
Colliery Spoil	1.97	0.41	0.00	1.56

7.5 It is considered that the figures for aggregate use of power station ash, blast furnace slag and basic oxygen furnace slag given in the Capita Symonds survey (Table 16) may underestimate the actual position at that time.



- 7.6 Construction, demolition and excavation wastes (CDEW) provide a further source of materials that may be used as alternatives to primary aggregates. The report "Survey of Arisings and Use of Construction Demolition and Excavation Waste as Aggregate in England in 2003" was published by ODPM in October 2004. The report gave estimates of recycled aggregate and soil in England in 2003. The regional estimate for Yorkshire and Humber was 4.44mt +/- 14% for recycled aggregate and 0.64mt +/- 19% of recycled soil giving a total figure of 5.08mt +/- 13%.
- 7.7 A follow-up survey "Survey of Arisings and Use of Alternatives to Primary Aggregates in England, 2005; Construction, Demolition and Excavation Waste" undertaken by Capita Symonds Ltd for the DCLG was published in February 2007. This report contains regional estimates of the arisings and use as aggregate of construction, demolition and excavation waste (CDEW) in 2005. Table 17 reproduces Table A10.3 from the published report and sets out estimates for Yorkshire and Humber. The estimated regional total for recycled aggregate is 5.25mt and for recycled soil 0.55mt out of total estimated arisings of CDEW of 10.50mt.

**TABLE 17 - REGIONAL ESTIMATES OF CDEW RECYCLED BY CRUSHERS AND/OR SCREENS, USED/DISPOSED OF AT LANDFILLS, AND SPREAD ON PARAGRAPH 9A(1) AND 19A(2) REGISTERED EXEMPT SITES IN 2005 (TONNES)**

<b>English Region</b>	<b>Yorkshire and Humber</b>			
Adjusted estimate of population of recycling crushers	106			
Estimated production of recycled graded aggregate (tonnes)	3,071,057			
Estimated production of recycled ungraded aggregate (tonnes)	2,184,463			
Estimated production of recycled soil (excl topsoil) (tonnes)	549,951			
<b>Estimated tonnage of unprocessed CDEW entering licensed landfills, and its use/fate</b>				
	<b>Engineering</b>	<b>Capping</b>	<b>Waste</b>	<b>Total</b>
Clean hard C&D Waste	129,941	11	106,231	236,183
Contaminated hard C&D waste	971	0	9,079	10,050
Clean excavation waste	316,979	849,623	1,422,466	2,589,067
Contaminated excavation waste	35,339	0	179,094	214,433
Clean "mixed" CDEW	42,543	8,322	326,696	377,561
Contaminated "mixed" CDEW	156	0	206,337	206,493
Other	116,070	1,111	155,515	272,696
<b>Total</b>	<b>641,999</b>	<b>859,067</b>	<b>2,405,416</b>	<b>3,906,482</b>
Estimated weight of waste materials (mainly excavation waste) used on Paragraph 9A(1) and 19A(2) registered exempt sites (tonnes)	784,947			
<b>Total estimated arisings of CDEW in 2005 (tonnes)</b>	<b>10,496,900</b>			

- 7.8 The report emphasises that although the national estimates appear reasonably robust, this is less true the more local the focus becomes, because the response rates were not high enough. The regional figures are estimates, with considerable uncertainty attached to them. Sub-regional estimates for North, West and South Yorkshire and for East Riding with North and North East Lincolnshire are also contained within the report in Tables A11.6, A11.7, A11.8 and A11.9 respectively. Again it is emphasised that these are only estimates. The full report, including the sub-regional estimates, is available on [www.communities.gov.uk](http://www.communities.gov.uk).

**WORKING PARTY MEMBERS**

Peter Watson	Yorkshire Dales N P A – Chairman
Dave Parrish	Yorkshire Dales N P A – Secretary
Mark Plummer	DCLG
Ken Hobden	MPA
Rob Moore	MPA (Tarmac)
Ben Ayres	MPA (Hanson)
Keith Frost	MPA (Cemex)
David Atkinson	MPA (Lafarge)
Peter Huxtable	BAA
Rob Smith	North Yorkshire CC
Max Rathmell	Leeds City Council
Helen McCluskie	Doncaster MBC
Carole Howarth	Bradford MDC
Shaun Robson	East Riding of Yorkshire Council
Glenn Wakefield	Kirklees MDC
Steve Littlejohn	Calderdale MBC

## SITES PRODUCING PRIMARY AGGREGATE IN YORKSHIRE AND HUMBER REGION: 2009

Quarry	Operator	Mineral	NGR
<b><u>NORTH YORKSHIRE COUNTY COUNCIL – Richmondshire District</u></b>			
Bridge Farm/Palsett Hill	Cemex	sand and gravel	4235 4988
Kiplin Hall	Lafarge	sand and gravel	4270 4976
Manor House (not active)	Tarmac	sand and gravel	4270 4977
Scorton/Tancred	Tarmac	sand and gravel	4242 4996
Barton/Duckett Hill	Sherburn Stone	carboniferous limestone	4218 5078
Forcett	Hanson	carboniferous limestone	4157 5111
Leyburn	Cemex	carboniferous limestone	4100 4912
Melsonby	D Richardson	carboniferous limestone	4187 5079
Wensley	Tarmac	carboniferous limestone	4068 4916
<b><u>Hambleton District</u></b>			
Nosterfield	Tarmac	sand and gravel	4278 4793
Gebdykes	Yorkshire Roadstone	magnesian limestone	4237 4822
<b><u>Ryedale District</u></b>			
West Heslerton	Cook and Son	Sand	4917 4770
Knapton	Todd Waste Management	Chalk	4888 4750
Newbridge	Cemex	jurassic limestone	4800 4860
Settrington	Fenstone	jurassic limestone	4827 4700
Wath	Lafarge	jurassic limestone	4671 4749
Whitewall	W Clifford Watts	jurassic limestone	4790 4694
<b><u>Scarborough District</u></b>			
Wykeham	Hanson	sand and gravel	4983 4825
<b><u>Harrogate District</u></b>			
Allerton Park	Hanson	sand and gravel	4406 4595
Marfield	Lafarge	sand and gravel	4213 4816
Ripon City	Aggregate Industries	sand and gravel	4325 4700
Ripon	Hanson	sand and gravel	4288 4770
Coldstones	Hanson	carboniferous limestone	4125 4642
Potgate	Lightwater Quarries	magnesian limestone	4276 4760
<b><u>Selby District</u></b>			
Mill Balk	Plasmor	Sand	4589 4215
Hensall	Darrington	Sand	4588 4225
Barnsdale Bar/Long Lane	Darrington	magnesian limestone	4517 4149
Foxcliffe	Darrington	magnesian limestone	4487 4262

Jackdaw Crag	Darrington	magnesian limestone	4466 4415
Newthorpe	Darrington	magnesian limestone	4460 4323
Wentbridge	Allied Plant	magnesian limestone	4498 4171
<b><u>YORKSHIRE DALES NATIONAL PARK</u></b>			
Arcow	Tarmac	sillstone, greywacke	3803 4704
Dry Rigg	Lafarge	sillstone, greywacke	3804 4694
Horton	Hanson	carboniferous limestone	3800 4721
Ingleton	Hanson	sillstone, greywacke	3705 4742
Swinden	Tarmac	carboniferous limestone	3983 4615
<b><u>DONCASTER MBC</u></b>			
Austerfield	Hanson	sand	4659 3950
Blaxton (not active)	Tarmac	sand	4687 4047
Dunsville	Marshalls	sand	4665 4075
Finningley	Lafarge	sand and gravel	4679 3985
The Lings (not active)	Tarmac	sand	46534077
Barnsdale Bar	Darrington	magnesian limestone	4511 4142
Cadeby	Lafarge	magnesian limestone	4524 4005
Glen	Marshalls	magnesian limestone	4546 3948
Hazel Lane	Catplant	magnesian limestone	4500 4108
Holme Hall	Tarmac	magnesian limestone	4545 3940
Warmsworth	Sibelco UK	magnesian limestone	4535 4004
<b><u>ROTHERHAM MBC</u></b>			
Harrycroft (not active)	Lafarge	magnesian limestone	4520 3822
<b><u>LEEDS CITY COUNCIL</u></b>			
Methley	Lafarge	sand and gravel	4408 4265
Arthington	Blackshaw Holdings	carboniferous sandstone	4268 4436
Blackhill	Mone Bros	carboniferous sandstone	4270 4422
Britannia	Woodkirk Stone	carboniferous sandstone	4268 4261
Howley Park	Marshalls Natural Stone	carboniferous sandstone	4262 4256
<b><u>BRADFORD MDC</u></b>			
Bank Top	M & M Stone	carboniferous sandstone	4091 4375
Bolton Woods	Pickard Group	carboniferous sandstone	4162 4364
Fagley	Pickard Group	carboniferous sandstone	4185 4353
Naylor Hill	Gillson	carboniferous sandstone	4040 4364
<b><u>KIRKLEES MDC</u></b>			
Appleton	Marshalls Natural Stone	carboniferous sandstone	4193 4086
Crosland Moor	Johnson Wellfield	carboniferous sandstone	4118 4144
Moselden	Marshalls Natural Stone	carboniferous sandstone	4043 4162
Sovereign	Marshalls Natural Stone	carboniferous sandstone	4189 4089
Temple	Holgate Construction	carboniferous sandstone	4210 4166
Windy Ridge	R M & S Peel	carboniferous sandstone	4031 4062

<b><u>WAKEFIELD MDC</u></b>			
Darrington	Darrington	magnesian limestone	4491 4212
Park Balk	Plasmor	magnesian limestone	4020 2269
<b><u>EAST RIDING OF YORKSHIRE COUNCIL</u></b>			
Brandesburton	Sandsfield Gravel	sand	5132 4473
Garton	W Clifford Watts	sand and gravel	4950 4600
Park Farm	W Clifford Watts	sand and gravel	5119 4581
Little Catwick	Yarrows Aggregates	sand and gravel	5122 4444
Mill Hill	Holderness Aggregates	sand and gravel	5240 4255
North Cave	Humberside Aggregates	sand and gravel	4886 4317
Greenwick	Fenstone	Chalk	4842 4565
Huggate	Fenstone	Chalk	4875 4548
Partridge Hall	E W Creaser	Chalk	4858 4470
Riplingham	Stoneledge Plant	Chalk	4954 4336
Swinescaife	W Clifford Watts	Chalk	4930 4325
<b><u>NORTH LINCOLNSHIRE COUNCIL</u></b>			
Cove Farm	Sibelco UK	Sand	4738 4008
Kettleby Parks	C&G Concrete	sand and gravel	5055 4090
Messingham	Sibelco UK	sand	4910 4039

## YORKSHIRE AND HUMBER REGION

## AGGREGATES WORKING PARTY

## PUBLICATIONS

<b>Title</b>	<b>Date</b>
Interim Report	1977
Supplementary Report 1977	1980
Commentary Part One	1980
Commentary Part Two	1983
Commentary: Regional Interpretation	1983
1985 Annual Review	1985
AM 85 Report	1987
Regional Commentary	1988
Regional Interpretation	1989
1988 Survey	1989
Am 89 Survey	1990
Regional Commentary 1992	1992
Aggregates Monitoring Reports 1990 – 1991 Annual Reports 1990 – 1992	1993
Aggregates Monitoring Report 1992	1993
Guidelines for Aggregates Provision in England and Wales 1992 – 2006 – Report of the Sub-Regional Apportionment	1994
Report of the 1993 Aggregates Monitoring Survey	1995
Report of the 1994 Annual Monitoring Survey	1995
Report of the 1995 Annual Monitoring Survey	1996
Annual Report 1996/Aggregates Monitoring 1996	1997
Annual Report 1997/Aggregates Monitoring 1997	1998
Annual Report 1998/Aggregates Monitoring 1998	2000
Annual Report 1999/Aggregates Monitoring 1999	2001
Annual Report 2000/Aggregates Monitoring 2000	2001
Annual Report 2001/Aggregates Monitoring 2001	2002
Annual Report 2002/Aggregates Monitoring 2002	2003
Annual Report 2003/Aggregates Monitoring 2003	2004
Annual Report 2004/Aggregates Monitoring 2004	2005
Annual Report 2005/Aggregates Monitoring 2005	2007
Annual Report 2006/Aggregates Monitoring 2006	2007
Annual Report 2007/Aggregates Monitoring 2007	2008
Annual Report 2008/Aggregates Monitoring 2008	2009
Annual Report 2009/Aggregates Monitoring 2009	2011

Annual Reports from 1999 are available on the DCLG Website [www.communities.gov.uk](http://www.communities.gov.uk). Copies of Reports are also available from:

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